

1 I claim:

- 2 1. A level control system for controlling the thickness of a work material in a slurry
3 form, said level control system comprising in combination:
4 a. a moving belt system;
5 b. a fluid reservoir for dispensing slurry onto the moving belt;
6 c. a control valve for filling the fluid reservoir with slurry at a controlled rate;
7 d. a blade positioned above the moving belt for regulating the thickness of the slurry that
8 passes beyond said blade;
9 e. a lens disposed near the moving belt between said fluid reservoir and said blade for
10 receiving light reflected from the upper surface of the slurry;
11 f. a light sensor disposed relatively remote from the slurry, said light sensor generating
12 electrical signals in response to light received thereby;
13 g. a fiber optic cable extending between the lens and the light sensor for coupling light
14 received by said lens to said light sensor;
15 h. a control circuit coupled to said light sensor and responsive to said electrical signals
16 for generating a control signal, said control circuit being coupled to said control valve for
17 providing said control signal to regulate the flow of slurry through said control valve.

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19 2. The level control system recited by claim 1 wherein said control valve is responsive
20 to pneumatic pressure, and wherein said control circuit provides said control signal in the form of
21 a regulated pneumatic pressure to said control valve.

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23 3. The level control system recited by claim 2 wherein said regulated pneumatic
24 pressure is substantially inversely proportional to the rate of flow of slurry through said control
25 valve.

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27 4. The level control system recited by claim 2 wherein said control circuit includes a
28 pressure regulator responsive to said electrical signals for generating said control signal.